

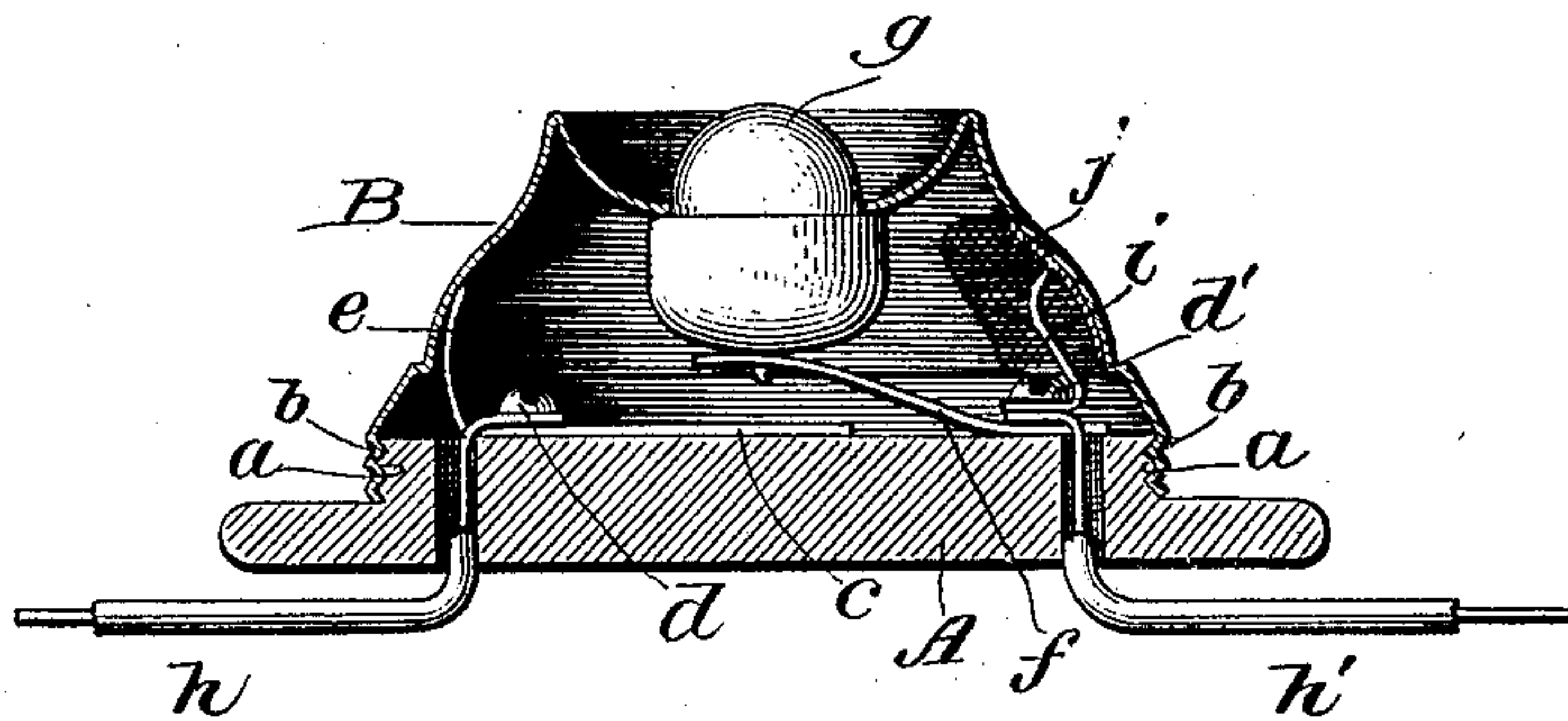
(No Model.)

E. L. ASHLEY & W. H. CAMP.  
PUSH BUTTON AND THERMOSTAT.

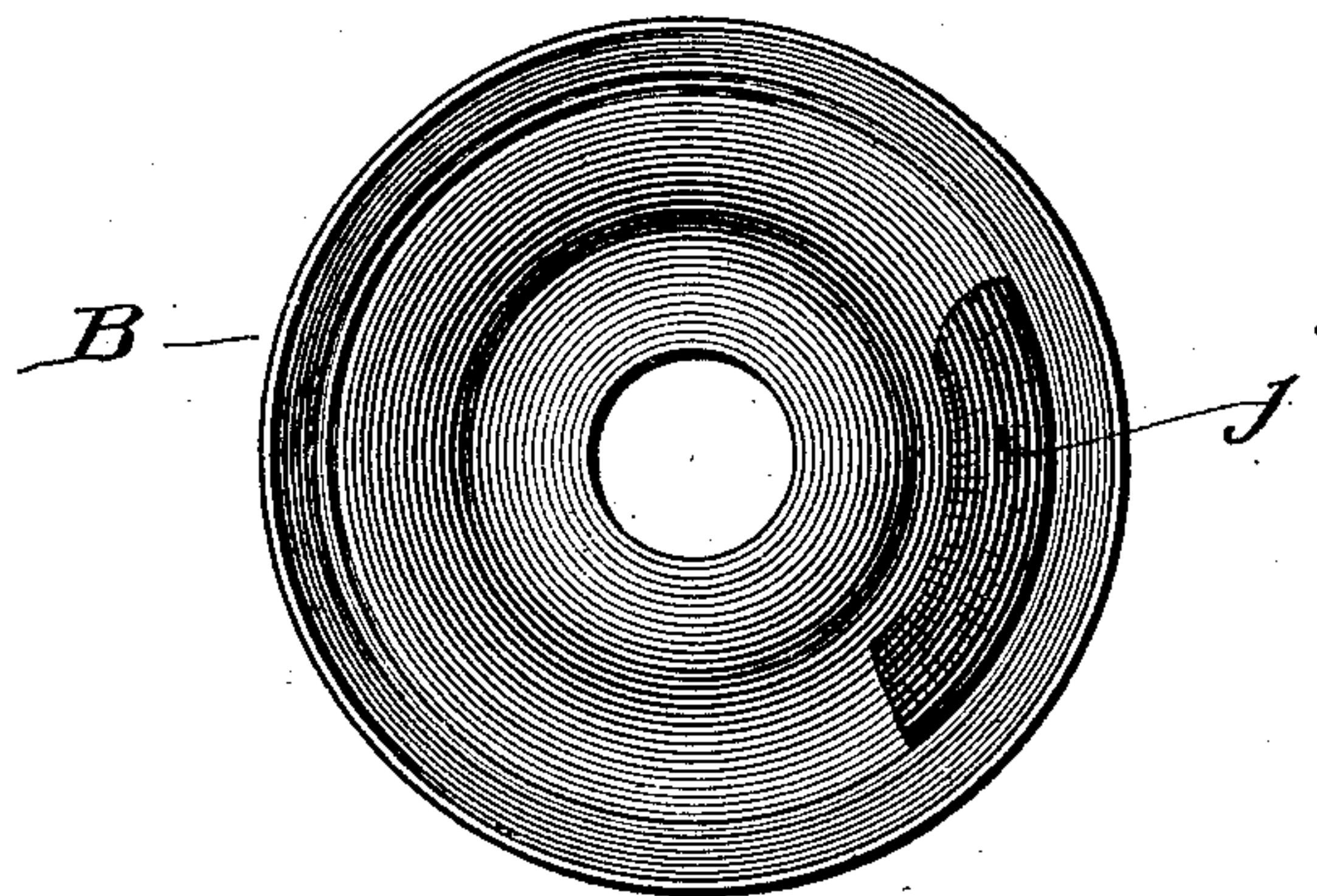
No. 488,645.

Patented Dec. 27, 1892.

*Fig. 1.*



*Fig. 2.*



**WITNESSES:**

H. Finch.  
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# UNITED STATES PATENT OFFICE.

EDWARD L. ASHLEY AND WALLACE H. CAMP, OF WATERBURY,  
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## PUSH-BUTTON AND THERMOSTAT.

SPECIFICATION forming part of Letters Patent No. 488,645, dated December 27, 1892.

Application filed May 25, 1892. Serial No. 434,302. (No model.)

*To all whom it may concern:*

Be it known that we, EDWARD L. ASHLEY and WALLACE H. CAMP, citizens of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in a Combined Electric Push-Button and Fire-Alarm; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to certain new and useful improvements in combined electrical push-buttons and fire alarms, and has for its object to provide a device of this description which shall be very simple in construction, effective in operation and extremely inexpensive.

In the accompanying drawings,—Figure 1 is a vertical sectional elevation of a combined push-button and fire alarm embodying our improvements, and Fig. 2, an interior elevation of the metal shell or housing shown in Fig. 1.

Similar letters of reference denote like parts in both the figures of the drawings.

A is an ordinary wooden base surmounted by a thin metallic shell B. Said wooden base is exteriorly screw threaded, as seen at *a*, to engage the interior threads *b* of the shell B, so that said shell and base may be detachably secured together.

*c* is a flat contact-plate secured to the base A by screw *d*. The heel end of this plate *c* is formed into a spring *e* which bears against the metallic shell B to maintain electrical contact with the latter for a purpose presently explained. Secured to the base by a screw *d'* is a flat metal spring *f* which overhangs the contact plate *c*. This spring *f* is operated upon in the usual manner by the ordinary push-button *g*.

*h*, *h'*, are the line wires secured respectively to the screws *d*, *d'*, and held by said screws in electrical contact with the plate *c* and spring *f*.

The device thus constructed may be used as a push-button for ordinary signaling purposes, and in this respect its operation is no different from that of the well known devices of this description. When the button *g* is

pressed sufficiently to cause the spring *f* to contact with the plate *c* an electrical circuit is established, thereby causing the ringing of a bell or other suitable signal to be operated.

*i* is a flat metal spring finger which is in electrical contact with the line wire *h'*. This spring *i* bears resiliently against the inner wall of the metallic shell B, and is separated from said shell by a thin coating of some fusible non-conducting material *j*, such as shellac, wax, or the like. The coating of non-conducting fusible material is applied over a portion of the inner wall of the metallic shell, as seen clearly at Fig. 2, in the form of a liquid or paint and is then permitted to harden.

Should a fire occur where our device is located, the consequent rise of temperature will heat the thin metal shell B and cause the insulation *j* to fuse, thereby permitting the spring *i* to make electrical contact with said shell. The shell being in contact with the springs *e*, *i*, the circuit is closed and the bell or other alarm is thereby sounded. To re-establish the normal condition of our device so that it shall perform the usual function of a push button, the shell is turned so as to carry the insulation away from the spring *i*, then heated so that the insulation may flow and close up the furrow made by the spring *i* and finally, such shell when cool is turned to the interposed hardened insulation between said spring and shell.

We are aware that it is not broadly new to provide a fire-alarm in which the electric terminals are separated by a block of fusible insulation, and we are also aware that combined push-buttons and fire alarms have heretofore been known and used, and we do not wish to be understood as claiming the broad idea of closing an electric circuit by the fusing of a block of insulation interposed between the terminals as aforesaid.

A decided objection to a block of fusible insulation is that it is bulky and that heat can not attach the same to quickly melt it.

The main feature of our invention resides in coating the interior of the thin metal shell with a fusible insulation as before set forth, and it will be readily understood, that, as the shell itself is a good conductor both of elec-

tricity and heat, the conditions are very favorable for the quick fusing of the insulation and the consequent sounding of the alarm.

We claim,—

- 5 1. In a combined push-button and fire alarm, the combination of the contact plates with which the two line wires are respectively connected, the thin metallic shell, the push-button supported therein, an electric connection between said shell and one of said wires,  
10 a spring finger electrically connected with the other line wire and bearing against the inner wall of the shell, and a fusible coating of insulation interposed between said finger  
15 and shell, substantially as set forth.

2. The combination of the thin metal shell mounted upon a base of insulating material, the wire *h* electrically connected with said shell, the fusible coating of insulation on the inner wall of the shell, the wire *h'*, and the spring-finger *i* electrically connected with the wire *h'* and bearing resiliently against said coating, substantially as shown and described. 20

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD L. ASHLEY.  
WALLACE H. CAMP.

Witnesses:

B. G. BRYAN,  
W. P. BRYAN.